

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference LW9044PC	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/KR 2004/001395	(Earliest) Priority Date (<i>day/month/year</i>) 25 July 2003 (25.07.2003)	International filing date (<i>day/month/year</i>) 11 June 2004 (11.06.2004)
Applicant SAMSUNG ELECTRONICS CO., LTD.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see continuation of this first sheet.

2. ☐ Certain claims were found unsearchable (see continuation of this first sheet)

3. ☐ Unity of invention is lacking (see continuation of this first sheet)

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in the continuation of this first sheet. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 5
- ☒ as suggested by the applicant.
- ☐ as selected by this Authority, because the applicant failed to suggest a figure.
- ☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

Continuation No. IV:**Text of the abstract****(Continuation of item 5 of the first sheet)**

An array substrate (100a) includes a transparent substrate (304), a first insulation layer (306) and a pixel electrode (103). The transparent substrate (304) includes a display region (DR) that displays an image, a peripheral region (PR) having a driving circuit (101) for displaying an image through the display region, and a sealine region (SLR) that surrounds the display region (DR) to define the display region and the peripheral region (PR). The first insulation layer (306) is formed over the transparent substrate (304), and the first insulation layer (306) has an opening window (301) in the sealine region (SLR). The pixel electrode (103) is formed on the first insulation layer (306) of the display region (DR). The bonding between a color filter substrate (401) and an array substrate (100a) is improved. Furthermore, liquid crystal material is completely filled into between the color filter substrate and the array substrate.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR 2004/001395

A. CLASSIFICATION OF SUBJECT MATTER

G02F1/1339, 1/1341

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G02F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPI, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/0122983 A1 (KIM et al.) 3 July 2003 (03.07.2003) <i>fig. 1-5D; paragraphs 13,14; 33-44.</i>	1,3-7,9-13,15- 18,20-23
Y	--	2,8,14,19
X	US 2001/0013918 A1 (KWAK et al.) 16 August 2001 (16.08.2001) <i>fig.6-17; paragraphs 10,11; 45-60.</i>	1-3,6,13-15
Y	--	8,19
A	--	4,5,7,9-12,16- 18,20-23

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
21 July 2004 (21.07.2004)

Date of mailing of the international search report
7 September 2004 (07.09.2004)

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR 2004/001395

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 9-033 933 A (FUJITSU LTD) 7 February 1997 (07.02.1997) <i>abstract; Fig. 1A-2C.</i>	2,8,14,19 1,7,13,18

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR 2004/001395

Patent document cited in search report			Publication date	Patent family member(s)	Publication date
JP	A	9033933A 2		none	
US	A	20010013 918		none	
US	A	20030122 983		none	